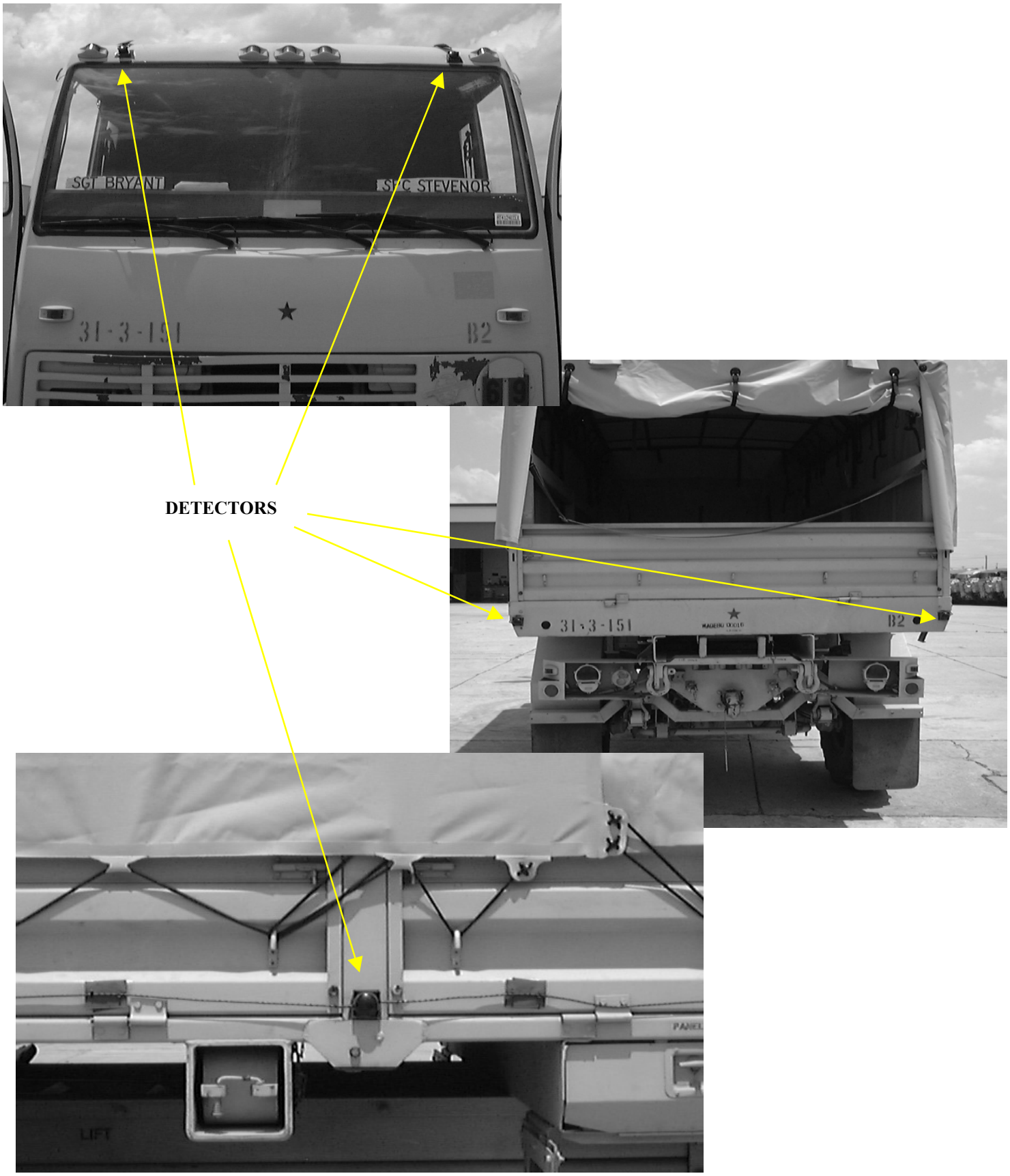
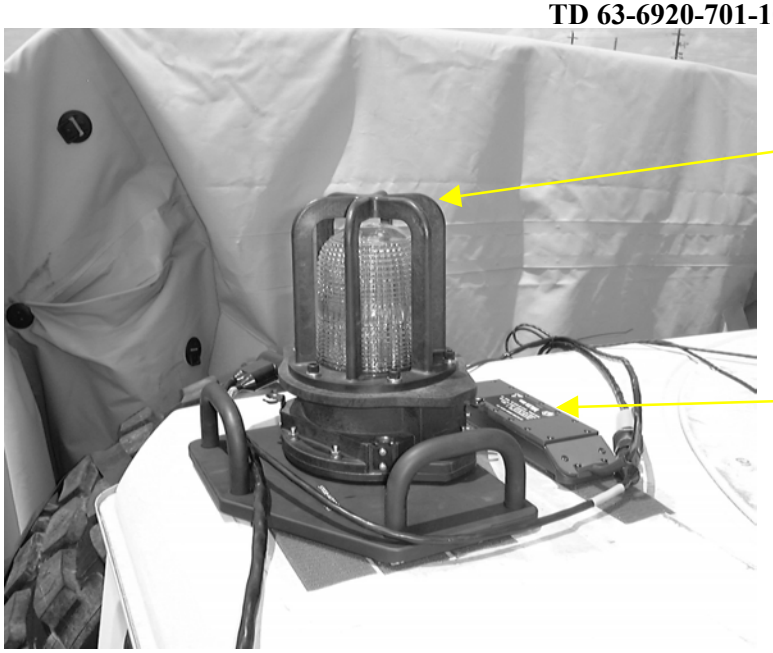


Figure 2-17. LMTV Truck, 2.5 Ton Installation (Sheet 1 of 3).



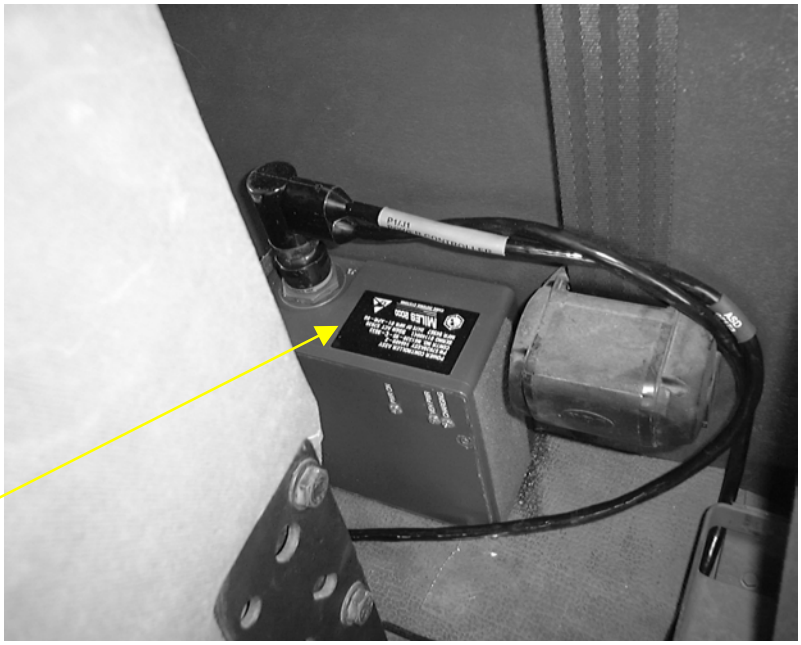
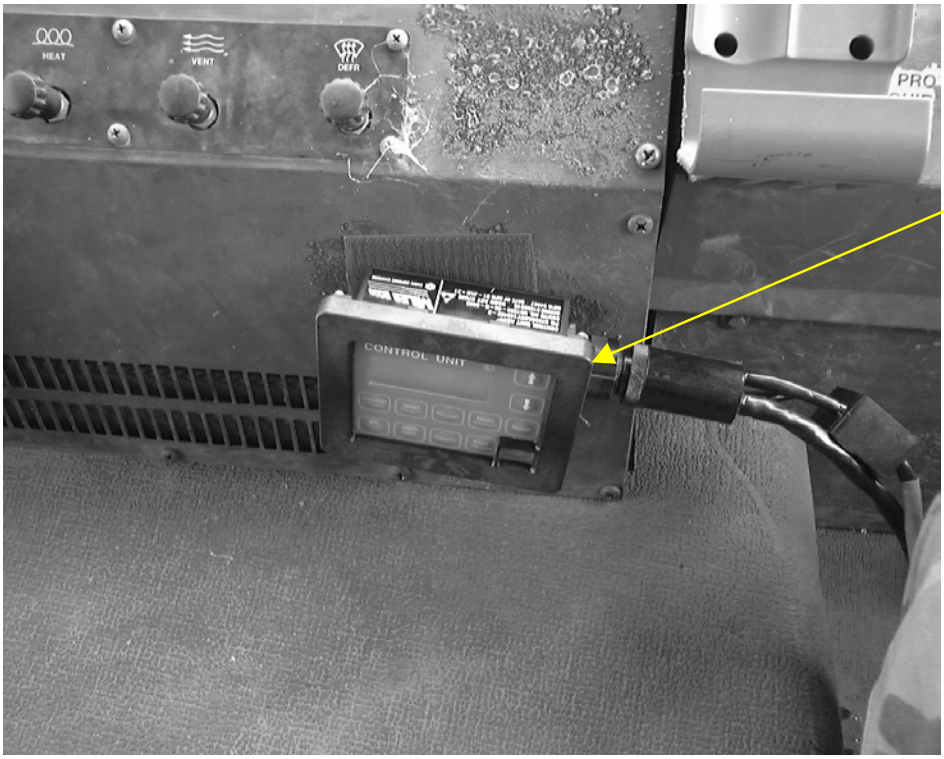


Figure 2-17. LMTV Truck, 2.5 Ton Installation (Sheet 2 of 3).



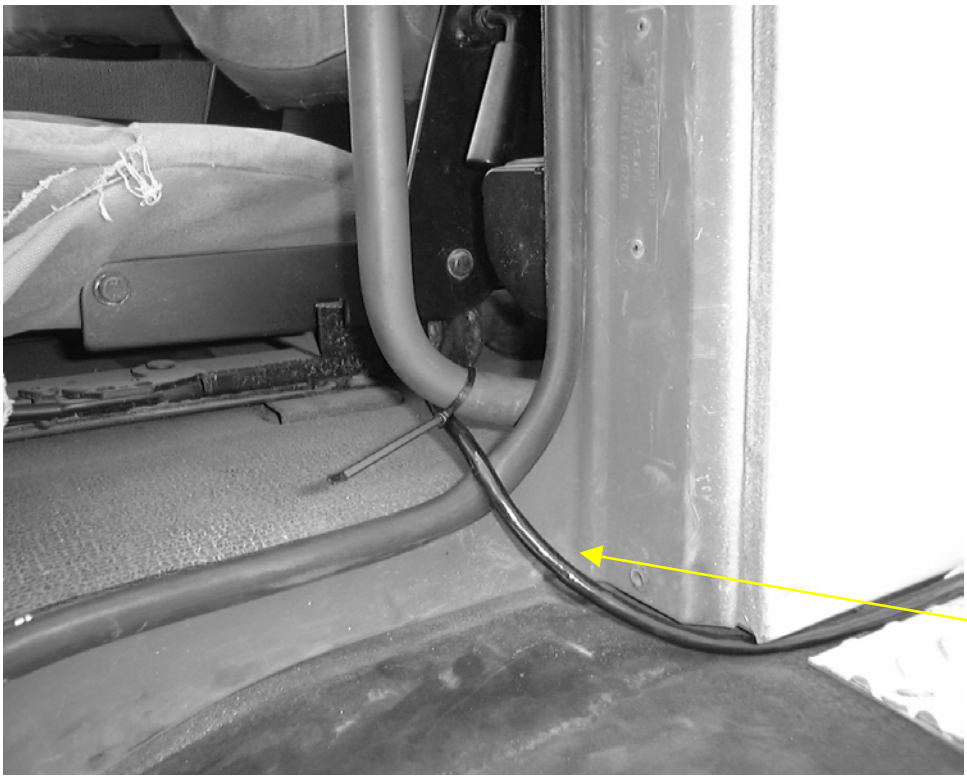


Figure 2-17. LMTV Truck, 2.5 Ton Installation (Sheet 3 of 3).

2.3.2.12.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the vehicle dashboard.

f. Mount the CU to the dashboard, and ensure it is firmly seated.

2.3.2.12.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape to the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to an area on the floor where the Power Controller will not be in the way.

f. Mount the Power Controller to the floor, and ensure it is firmly seated.

2.3.2.12.5 System Cable.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals.

Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator.

Cable segments are labeled with "P" (plug) and "J" (jack) designators as shown in the following example: "P1/J2," where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed.

Inside/outside cable access is through the rear of the canvas top.

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route segment (P5) to the vehicle power slave receptacle.

e. Route segment (P1-violet sleeve) through lower part of driver's door to the Power Controller, and connect (P1) to (J1) of the Power Controller

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

g. Route segment (P3-green sleeve) through the upper part of the commander's door to the KSI, and connect (P3) to (J1) of the KSI.

h. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps.

j. Connect (P5) to the slave receptacle connector.

2.3.2.13 M939A1/A2 Truck, 5 Ton. See Figure 1-2 for Independent Target System (ITS) components. Installation procedures are similar to those for the LMTV, paragraph 2.3.2.13, Figure 2-17.

2.3.2.13.1 Detector Array.

WARNING

Never touch the vehicle exhaust equipment when installing or removing MILES 2000 equipment. The exhaust can be very hot and cause severe burns.

CAUTION

Do not let MILES 2000 cables touch the vehicle exhaust or heating equipment. Heat can cause damage to cables and/or malfunction of the equipment.

ITS vehicle configurations are varied, so there is no specific way to install the Detector Array on a vehicle. When installing the Detector Array, follow the guidelines below:

a. Remove Detector Array from the transit case, and inspect cable segments and detectors for damage that would prevent normal operation.

b. Wipe all detectors clean and inspect connector for dirt and/or damage.

c. Report any damage on the appropriate form, and replace array if unusable.

d. When routing array segments, whenever possible, there should be detectors installed on the right and left sides as well as on the front and rear. However, this is an ideal layout that should only be used if placement can be accomplished without interfering with normal vehicle operations or presenting a safety hazard. In some cases, the cabling may not be long enough to put detectors on all four sides.

e. Secure all array segments with fastener tape at frequent intervals. Extra cable between detectors should be rolled and secured to the vehicle.

2.3.2.13.2 Kill Status Indicator (KSI). Use the best location which allows for 360E clearance/viewing for the specific truck configuration. Paragraph a. covers fastener tape attachment of the KSI. See Figure 1-2 for KSI mounting adapters/plates.

a. Direct fastener tape attachment:

(1) Remove the KSI and mounting plate from the transit case, and inspect the KSI for any damage that would prevent installation or operation.

(2) Inspect strobe assembly of the KSI for cracks. Inspect connector for dirt, and bent or damaged pins.

(3) Replace and report damaged equipment, as required.

NOTE

For **Hard Top** vehicles, use the KSI mounting plate only. Apply primer and fastener tape to the mounting plate, if needed (pile fastener tape on the bottom and hook fastener tape on the top), and the bottom of the KSI, if needed (pile fastener tape). Follow steps 9. and 10. to complete the installation procedures.

(4) If the mast is not attached to the KSI, apply two (2) large strips of pile fastener tape to the bottom of the KSI, if needed (ensuring the center bolt is not obstructed), and two (2) large strips of hook fastener tape to the top of the mast, if needed (ensuring the mounting hole is not obstructed).

NOTE

For the following step, make sure the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

(5) After matching the center bolt with the mounting hole, making sure the four (4) rubber latches on the mast are in line with the four (4) latching brackets on the KSI, place the KSI securely on the mast.

(6) Pull each rubber latch up and over it's latching bracket.

(7) Apply primer and pile fastener tape to the bottom of the mast, if needed.

(8) Apply primer and hook fastener tape to the hood of the vehicle in a stable area between the two windshields where the KSI will have 360E clearance. (Locations will vary with different truck configurations.)

(9) Attach the mast/mounting plate to the hood between the two windshields. Ensure the KSI and mast are securely mounted.

2.3.2.13.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the vehicle dashboard.

f. Mount the CU to the dashboard, and ensure that it is firmly seated.

2.3.2.13.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape on the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to an area on the floor where the Power Controller will not be in the way.

f. Mount the Power Controller to the floor and ensure it is firmly seated.

2.3.2.13.5 System Cable.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals.

Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator. Cable segments are labeled with "P" (plug) and "J" (jack) designators as shown in the following example: "P1/J2," where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed.

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route segment (P5) to the vehicle power slave receptacle, and connect (P5) to the slave receptacle connector

e. Route segment (P1-violet sleeve) through lower part of driver's door to the Power Controller, and connect (P1) to (J1) of the Power Controller

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

g. Route segment (P3-green sleeve) through the upper part of the commander's door to the KSI, and connect (P3) to (J1) of the KSI.

h. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps.

j. Connect (P5) to the slave receptacle connector.

2.3.2.14. M978 Truck, Fuel. (See Figure 2-18) See Figure 1-2 for Independent Target Systems (ITS) components. Installation procedures are similar to those for the M977 HEMTT, paragraph 2.3.2.1, Figure 2-6.

Figure 2-18. M978 Truck, Fuel (See Figure 2-6 for MILES installation illustrations.)

2.3.2.14.1 Detector Array.

WARNING

Never touch the vehicle exhaust equipment when installing or removing MILES 2000 equipment. The exhaust can be very hot and cause severe burns.

CAUTION

Do not let MILES 2000 cables touch the vehicle exhaust or heating equipment. Heat can cause damage to cables and/or malfunction of the equipment.

ITS vehicle configurations are varied, so there is no specific way to install the Detector Array on a vehicle. When installing the Detector Array, follow the guidelines below:

a. Remove Detector Array from the transit case, and inspect cable segments and detectors for damage that would prevent normal operation.

b. Wipe all detectors clean and inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route the cables the same as the HEMTT, illustrated in Figure 2-6.

e. Secure all array segments with fastener tape at frequent intervals. Extra cable between detectors should be rolled and secured to the vehicle.

2.3.2.14.2 Kill Status Indicator (KSI). See Figure 1-2 for KSI mounting adapters/plates.

a. Remove the KSI and mounting adapter from the transit case, and inspect the KSI for damage.

b. Inspect strobe assembly of the KSI for cracks. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the KSI, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the top of the air cleaner.

NOTE

For the following step, make sure the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

f. Attach the mounting plate to the vehicle and ensure the KSI and adapter are securely mounted.

2.3.2.14.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the outside wall of the vehicle cab behind the driver.

f. Mount the CU to the vehicle cab and ensure that it is firmly seated.

2.3.2.14.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape to the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the outside wall of the cab behind the driver, near the Control Unit.

f. Mount the Power Controller to the vehicle cab wall and ensure it is firmly seated.

2.3.2.14.5 System Cable.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals.

Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator.

Cable segments are labeled with “P” (plug) and “J” (jack) designators as shown in the following example: “P1/J2,” where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed.

NOTE

Inside/outside cable access is through the opening to the right of the driver's seat.

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route segment (P3-green sleeve) to the KSI, and connect (P3) to (J1) of the KSI.

e. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

g. Route segment (P1-violet sleeve) to the Power Controller, and connect (P1) to (J1) of the Power Controller.

h. Route segment (P5) to the vehicle power slave receptacle, and connect (P5) to the slave receptacle connector.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps.

2.3.2.15 M1097A2/M1035A2/XM1109/XM113/XM114 HMMWVs (Soft Tops). (See Figure 2-19.) See Figure 1-2 for Independent Target System (ITS) components.

2.3.2.15.1 Detector Array.

WARNING

Never touch the vehicle exhaust equipment when installing or removing MILES 2000 equipment. The exhaust can be very hot and cause severe burns.

CAUTION

Do not let MILES 2000 cables touch the vehicle exhaust or heating equipment. Heat can cause damage to cables and/or malfunction of the equipment.

ITS vehicle configurations are varied, so there is no specific way to install the Detector Array on a vehicle. When installing the Detector Array, follow the guidelines below:

a. Remove Detector Array from the transit case, and inspect cable segments and detectors for damage that would prevent normal operation.

b. Wipe all detectors clean and inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. When routing array segments, whenever possible, there should be detectors installed on the right and left sides as well as on the front and rear. However, this is an ideal layout that should only be used if placement can be accomplished without interfering with normal vehicle operations or presenting a safety hazard. In some cases, the cabling may not be long enough to put detectors on all four sides.

e. Secure all array segments with fastener tape at frequent intervals. Extra cable between detectors should be rolled and secured to the vehicle.

2.3.2.15.2 Kill Status Indicator (KSI). See Figure 1-2 for KSI mounting adapters/plates.

a. Remove the KSI, mounting plate, and the KSI mast assembly from the transit case, and inspect the KSI for damage.

b. Inspect strobe assembly of the KSI for cracks. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. If the mast assembly is not attached to the KSI, apply two (2) large strips of pile fastener tape to the bottom of the KSI,if needed (ensuring the center bolt is not obstructed), and two (2) large strips of hook fastener tape to the top of the mast assembly, if needed (ensuring the mounting hole is not obstructed).

NOTE

For the following step, make sure the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

e. After matching the center bolt with the mounting hole, making sure the four (4) rubber latches on the mast assembly are in line with the four (4) latching brackets on the KSI, place the KSI securely on the mast assembly.

f. Pull each rubber latch up and over its latching bracket.

g. Apply primer and hook fastener tape to the top of the mast assembly, if needed.

h. Apply primer and fastener tape to the mounting plate, if needed.

i. Apply primer and hook fastener tape to the hood of the vehicle, centered in front of the windshield.

j. Attach the KSI mast assembly to the mounting plate; mount the entire KSI unit on the hood of the vehicle, and ensure the KSI and mast assembly are securely mounted.

2.3.2.15.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the vehicle center console.

e. Mount the CU to the center console, and ensure it is firmly seated.

2.3.2.15.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape to the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the vehicle center console.

f. Mount the Power Controller to the center console, and ensure it is firmly seated.

2.3.2.15.5 System Cable Installation.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals.

Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator.

Cable segments are labeled with "P" (plug) and "J" (jack) designators as shown in the following example: "P1/J2," where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed.

Inside/Outside cable access is through the frame of the canvas door for the soft top models.

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

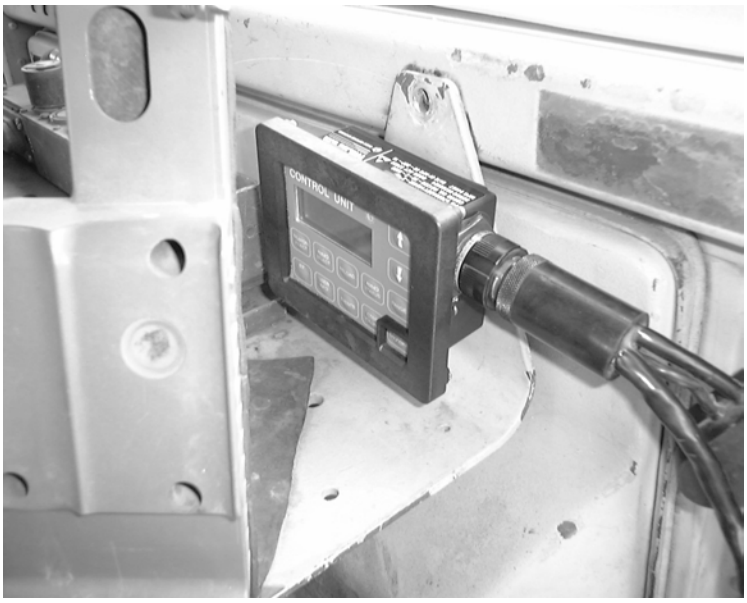
c. Replace and report damaged equipment, as required.

d. Route segment (P5) to the vehicle power slave receptacle.

e. Route segment (P1-violet sleeve) through lower part of driver's door to the Power Controller, and connect (P1) to (J1) of the Power Controller

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

Figure 2-19. HMMWVs SOFT TOP MILES Installation (Sheet 1 of 2)



POWER CONTROLLER UNIT

CONTROL UNIT

Figure 2-19. HMMWVs SOFT TOP MILES Installation (Sheet 2 of 2).

g. Route segment (P3-green sleeve) through the canvas behind the commander's seat to the KSI, and connect (P3) to (J1) of the KSI.

h. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps.

j. Connect (P5) to the slave receptacle connector.

2.3.2.16 M1025A2/M1043A2/M1045A2/M997A2/M996 HMMWVs (Hardtops). (See Figure 2-20.) See Figure 1-2 for Independent Target System (TIS) components.

2.3.2.16.1 Detector Array.

WARNING

Never touch the vehicle exhaust equipment when installing or removing MILES 2000 equipment. The exhaust can be very hot and cause severe burns.

CAUTION

Do not let MILES 2000 cables touch the vehicle exhaust or heating equipment. Heat can cause damage to cables and/or malfunction of the equipment.

CAUTION

When installing the Detector Array on a vehicle that has either an M2 or TOW mounted, arrange the detectors so that the detectors and cables do not hamper the loading or operation of the weapon. The rear detector should be placed above the taillights, so that the tailgate may be raised/lowered during TOW use.

ITS vehicle configurations are varied, so there is no specific way to install the Detector Array on a vehicle. When installing the Detector Array, follow the guidelines below:

a. Remove Detector Array from the transit case, and inspect cable segments and detectors for damage that would prevent normal operation.

b. Wipe all detectors clean and inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. When routing array segments, whenever possible, there should be detectors installed on the right and left sides as well as on the front and rear. However, this is an ideal layout that should only be used if placement can be accomplished without interfering with normal vehicle operations or presenting a safety hazard. In some cases, the cabling may not be long enough to put detectors on all four sides.

e. Secure all array segments with fastener tape at frequent intervals. Extra cable between detectors should be rolled and secured to the vehicle.

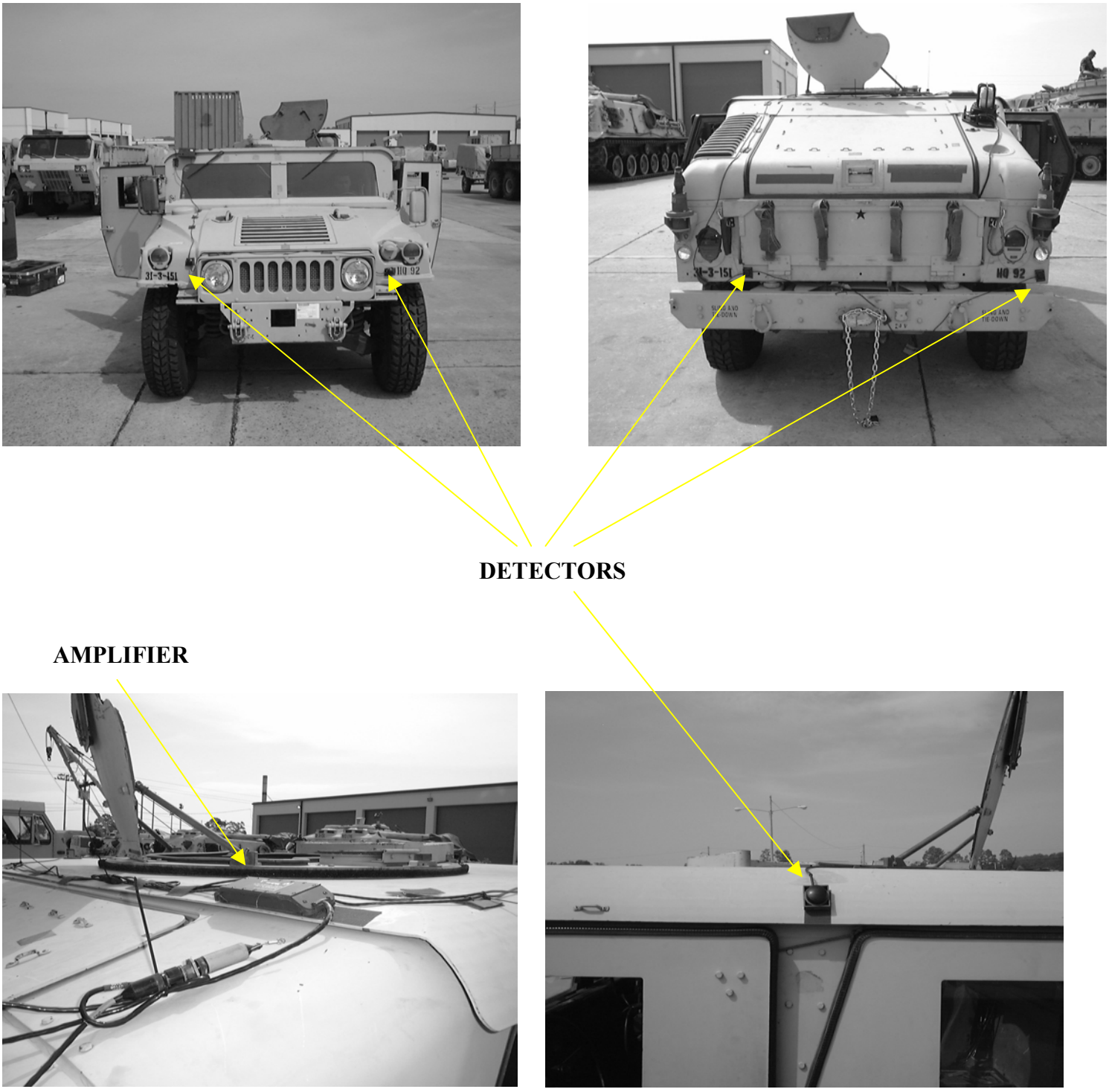


Figure 2-20. Hard Top HMMWVs MILES Installation. (Sheet 1 of 2)

CONTROL UNIT

POWER CONTROLLER UNIT

SLAVE CONNECTION

Figure 2-20. Hard Top HMMWVs MILES Installation. (Sheet 2 of 2)

2.3.2.16.2 Kill Status Indicator (KSI). The location in which the KSI is installed depends on the vehicle configuration. Paragraph a. covers fastener tape attachment of the KSI. See Figure 1-2 for KSI mounting adapter/plates.

a. Direct fastener tape attachment:

(1) Remove the KSI and mounting plate from the transit case, and inspect the KSI for any damage that would prevent installation or operation.

(2) Inspect strobe assembly of the KSI for cracks. Inspect connector for dirt, and bent or damaged pins.

(3) Replace and report damaged equipment, as required.

(4) Apply two (2) large strips of pile hook fastener tape to one of the rear corners of the hard top of the vehicle, or in the case of the M997A2 Maxi-Ambulance, directly on top of the ambulance shelter.

(5) Apply two (2) large strips of hook fastener tape to the bottom of the KSI, if there are none.

(6) Attach the KSI to the top of the vehicle. Ensure the KSI is securely mounted.

2.3.2.16.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the vehicle center console.

f. Mount the CU to the center console, and ensure it is firmly seated.

2.3.2.16.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape to the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the vehicle center console.

f. Mount the Power Controller to the center console, and ensure it is firmly seated.

2.3.2.16.5 System Cable.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals.

Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator.

Cable segments are labeled with "P" (plug) and "J" (jack) designators as shown in the following example: "P1/J2," where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed.

Inside/Outside cable access is through the rear door for the hard top models.

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route segment (P3-green sleeve) through the rear cargo hatch at the bottom to the KSI, and connect (P3) to (J1) of the KSI.

e. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

g. Route segment (P1-violet sleeve) to the Power Controller, and connect (P1) to (J1) of the Power Controller.

h. Route segment (P5) to the vehicle power slave receptacle, and connect (P5) to the slave receptacle connector.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps.

2.3.2.17 M9 ACE . (See Figure 2-22) See Figure 1-2 for Independent Target System (ITS) components.

2.3.2.17.1 Detector Array.

WARNING

Never touch the vehicle exhaust equipment when installing or removing MILES 2000 equipment. The exhaust can be very hot and cause severe burns.

CAUTION

Do not let MILES 2000 cables touch the vehicle exhaust or heating equipment. Heat can cause damage to cables and/or malfunction of the equipment.

ITS vehicle configurations are varied, so there is no specific way to install the Detector Array on a vehicle. When installing the Detector Array, follow the guidelines below:

a. Remove Detector Array from the transit case, and inspect cable segments and detectors for damage that would prevent normal operation.

b. Wipe all detectors clean and inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. When routing array segments, whenever possible, there should be detectors installed on the right and left sides as well as on the front and rear. However, this is an ideal layout that should only be used if placement can be accomplished without interfering with normal vehicle operations or presenting a safety hazard. In some cases, the cabling may not be long enough to put detectors on all four sides.

e. Secure all array segments with fastener tape at frequent intervals. Extra cable between detectors should be rolled and secured to the vehicle.

2.3.2.17.2 Kill Status Indicator (KSI). See Figure 1-2 for KSI mounting adapters/plates.

a. Remove the KSI and the KSI mast assembly from the transit case, and inspect the KSI for damage.

b. Inspect strobe assembly of the KSI for cracks. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. If the mast assembly is not attached to the KSI, apply two (2) large strips of pile fastener tape to the bottom of the KSI, if needed (ensuring the center bolt is not obstructed), and two (2) large strips of hook fastener tape to the top of the mast assembly, if needed (ensuring the mounting hole is not obstructed).

NOTE

For the following step, make sure the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

e. After matching the center bolt with the mounting hole, making sure the four (4) rubber latches on the mast assembly are in line with the four (4) latching brackets on the KSI, place the KSI securely on the mast assembly.

f. Pull each rubber latch up and over its latching bracket.

g. Apply primer and fastener tape to the bottom of the mast assembly, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

h. Apply primer and fastener tape to the top rear deck of the vehicle.

i. Attach the mast assembly to the top rear deck of the vehicle, and ensure the KSI and mast assembly are securely mounted.

2.3.2.17.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener tape installation.)

e. Apply primer and fastener tape on top of the deck next to the driver's vision block.

f. Mount the CU to the top deck and ensure it is firmly seated.

2.3.2.17.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape to the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. Apply primer and fastener tape to the floor of the rear deck.

f. Mount the Power Controller to the floor of the rear deck, and ensure it is firmly seated.

2.3.2.17.5 System Cable.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals.

Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator.

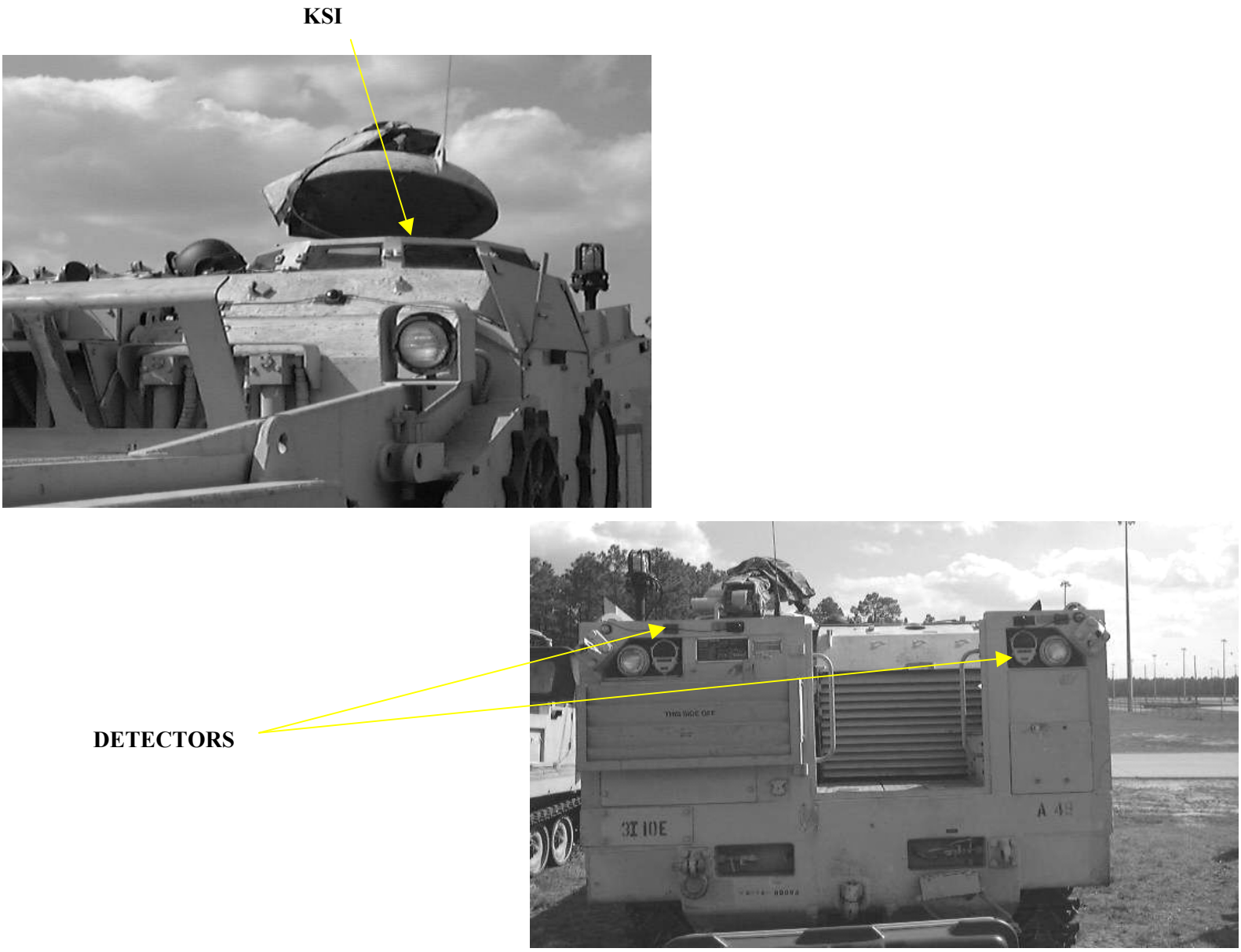


Figure 2-21. M9 ACE (Sheet 1 of 3)

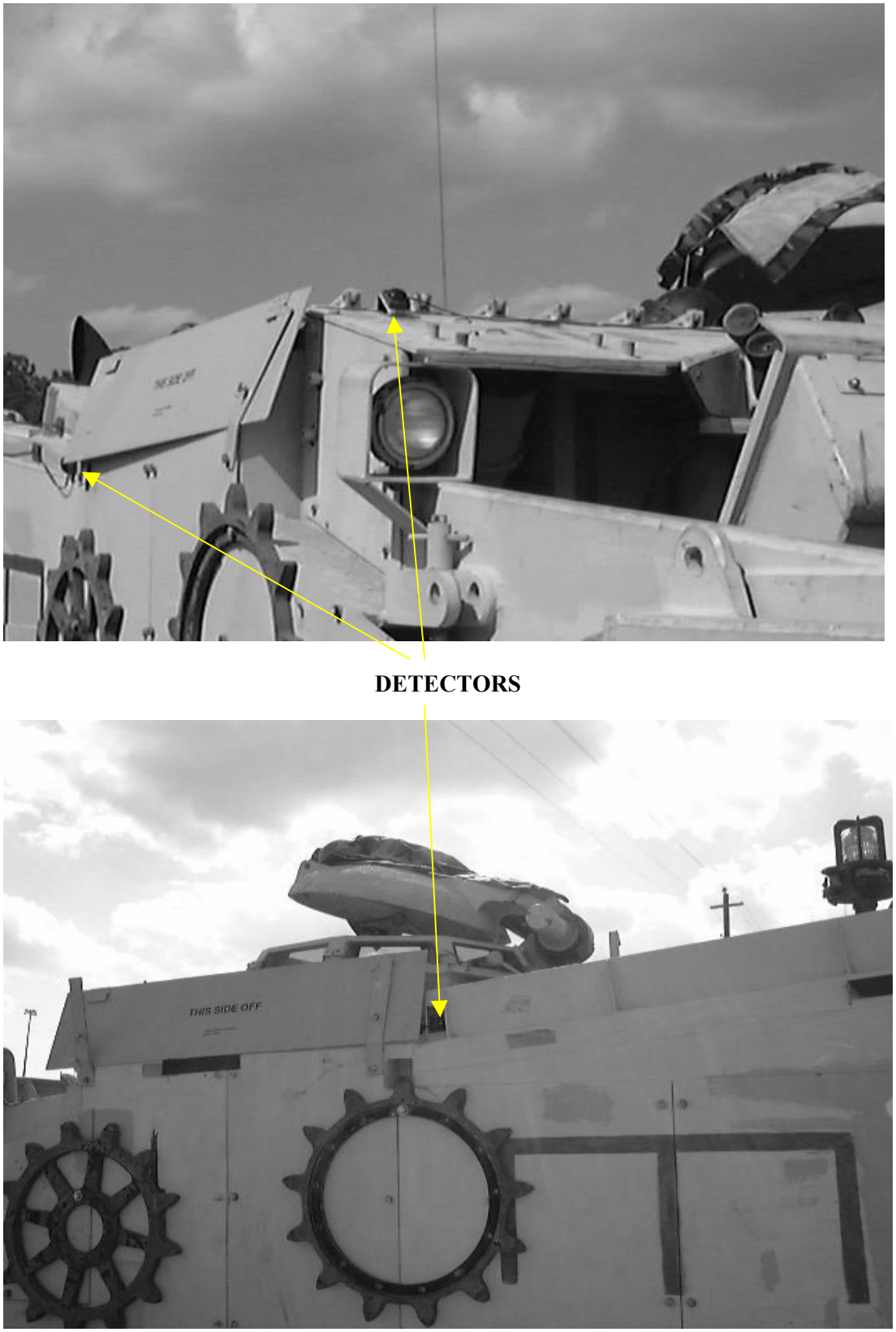
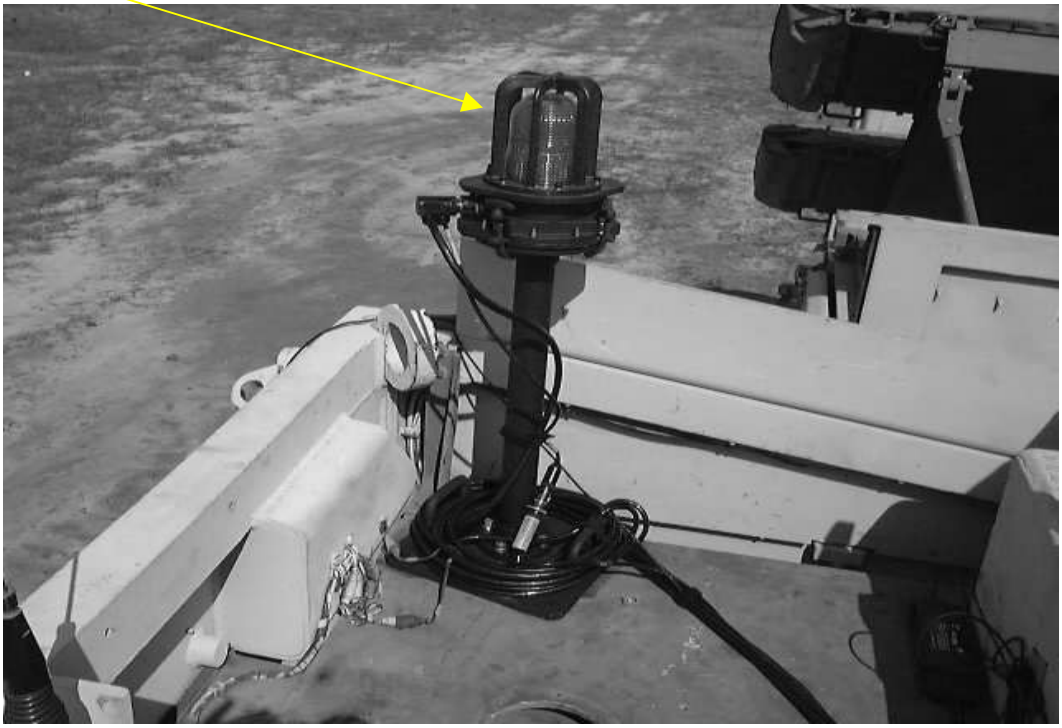
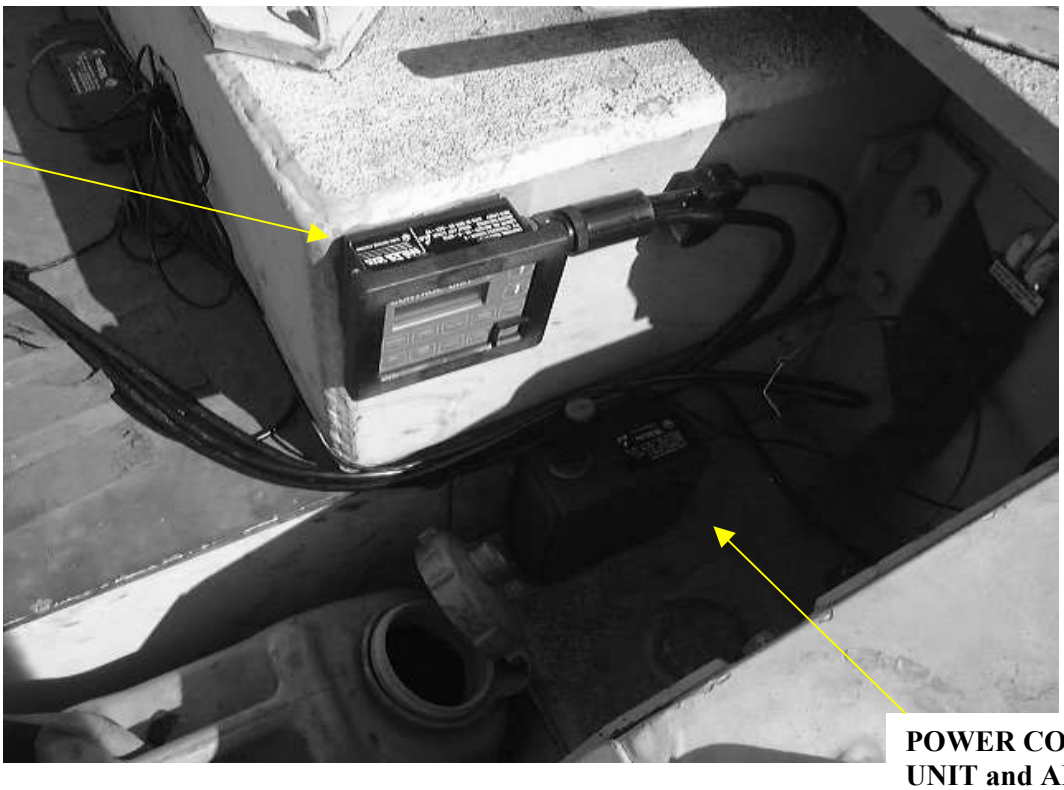


Figure 2-21. M9 ACE (Sheet 2 of 3)

KSI



CONTROL UNIT



POWER CONTROLLER
UNIT and AMPLIFIER

Figure 2-21. M9 ACE (Sheet 3 of 3)

Cable segments are labeled with "P" (plug) and "J" (jack) designators as shown in the following example: "P1/J2," where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed. Route the cable segment (P3) to the KSI and attach it to the KSI connector (J1).

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route segment (P3-green sleeve) to the KSI, and connect (P3) to (J1) of the KSI.

e. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

g. Route segment (P1-violet sleeve) to the Power Controller, and connect (P1) to (J1) of the Power Controller.

h. Route segment (P5) to the vehicle power slave receptacle, and connect (P5) to the slave receptacle connector.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps.

2.3.2.18 HEAVY STRUCTURES - Bunkers. See Figure 1-2 for Independent Target System (ITS) components.

2.3.2.18.1 Detector Array.

a. Remove Detector Array from the transit case, and inspect belt segments for damage that would prevent normal operation.

b. Wipe all detectors clean and inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route Detector Arrays so they cover the most visible portions of the bunker as adequately as possible.

e. Use fastener tape to secure the cable to the structure at frequent intervals.

2.3.2.18.2 Kill Status Indicator (KSI). Use whichever method and location works best for the specific structural configuration. See Figure 1-2 for KSI mounting adapters/plates.

a. Direct fastener tape attachment:

(1) Remove the KSI and the KSI mast assembly from the transit case, and inspect the KSI for damage.

(2) Inspect strobe assembly of the KSI for cracks. Inspect connector for dirt and/or damage.

(3) Replace and report damaged equipment, as required.

(4) If the mast assembly is not attached to the KSI, apply two (2) large strips of pile fastener tape to the bottom of the KSI, if needed (ensuring the center bolt is not obstructed), and two (2) large strips of hook fastener tape to the top of the mast assembly, if needed (ensuring the mounting hole is not obstructed). (Refer to paragraph 2.3.1.1 for fastener tape application.)

NOTE

For the following step, make sure that the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

(5) After matching the center bolt with the mounting hole, making sure the four (4) rubber latches on the mast assembly are in line with the four (4) latching brackets on the KSI, place the KSI securely on the mast assembly.

(6) Pull each rubber latch up and over its latching bracket.

(7) Apply primer and fastener tape to the bottom of the mast assembly, if needed.

(8) Apply primer and fastener tape to a stable area on the structure where the KSI will have 360E clearance. (Locations will vary with different structural configurations.)

(9) Attach the mast assembly to the stable area on the structure, and ensure the KSI and mast assembly are securely mounted.

b. U-bolt/Square bolt attachment:

(1) Remove the KSI and the KSI Mast U-bolt/square bolt assembly from the transit case, and inspect the KSI for any damage that would prevent installation or operation.

(2) Inspect strobe assembly of the KSI for cracks.

(3) Inspect connector for dirt and/or damage.

(4) Replace and report damaged equipment, as required.

(5) If the mast assembly is not attached to the KSI, apply two (2) large strips of pile fastener tape to the bottom of the KSI, if needed (ensuring the center bolt is not obstructed), and two (2) large strips of hook fastener tape to the top of the mast assembly, if needed (ensuring the mounting hole is not obstructed). (Refer to paragraph 2.3.1.1 for fastener tape application.)

NOTE

For the following step, make sure the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

(6) After matching the center bolt with the mounting hole, making sure the four (4) rubber latches on the mast assembly are in line with the four (4) latching brackets on the KSI, place the KSI securely on the mast assembly.

(7) Pull each rubber latch up and over its latching bracket.

(8) Using the Square bolt or U-bolt of the assembly, attach the KSI/mast assembly to a stable area on the structure where the KSI will have 360E clearance. (Locations will vary with different structural configurations.)

(9) Ensure the KSI and mast assembly are securely mounted.

2.3.2.18.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. The control unit can be mounted to various places inside the bunker; apply primer and fastener tape to the selected site.

f. Mount the CU to the selected site and ensure it is firmly seated.

2.3.2.18.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape on the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

e. The Power Controller can be attached to various places; apply primer and fastener tape to the selected site.

f. Mount the Power Controller to the selected site, and ensure it is firmly seated.

Note

Battery must be recharged every 48 hours

2.3.2.18.5 System Cable.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals. Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator.

Cable segments are labeled with "P" (plug) and "J" (jack) designators as shown in the following example: "P1/J2," where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed.

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route segment (P3-green sleeve) to the KSI, and connect (P3) to (J1) of the KSI.

e. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

g. Route segment (P1-violet sleeve) to the Power Controller, and connect (P1) to (J1) of the Power Controller.

h. The segment (P5) will not be connected in this configuration. Ensure the connector cover is secured over the connector, and secure the cable out of the way.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps.

2.3.2.19 LIGHT STRUCTURES - Buildings, Bridges, Towers. See Figure 1-2 for Independent Target System (ITS) components.

2.3.2.19.1 Detector Array.

a. Remove Detector Array from the transit case and inspect belt segments for damage.

b. Wipe all detectors clean.

c. Inspect connector for dirt and/or damage.

d. Replace and report damaged equipment, as required.
e. Route Detector Arrays so they cover the most visible portions of the structure as adequately as possible.

f. Use fastener tape to secure the cable to the structure at frequent intervals.

2.3.2.19.2 Kill Status Indicator (KSI). Use the best location for the specific structural configuration. Paragraph a. covers plate and mast attachment of the KSI, and paragraph b. covers U-bolt/Square-bolt attachment of the KSI. See Figure 1-2 for KSI mounting adapters/plates.

a. Plate and mast attachment:

(1) Remove the KSI and mounting plate from the transit case, and inspect the KSI for any damage that would prevent installation or operation.

(2) Inspect strobe assembly of the KSI for cracks. Inspect connector for dirt, and bent or damaged pins.

(3) Replace and report damaged equipment, as required.

(4) If the mast is not attached to the KSI, apply two (2) large strips of pile fastener tape to the bottom of the KSI, if needed (ensuring the center bolt is not obstructed), and two (2) large strips of hook fastener tape to the top of the mast, if needed (ensuring the mounting hole is not obstructed). (Refer to paragraph 2.3.1.1 for fastener tape application.)

NOTE

For the following step, make sure the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

(5) After matching the center bolt with the mounting hole, making sure the four (4) rubber latches on the mast are in line with the four (4) latching brackets on the KSI, place the KSI securely on the mast.

(6) Pull each rubber latch up and over its latching bracket.

(7) Apply primer and fastener tape to the bottom of the mast, if needed.

(8) Apply primer and fastener tape to a stable area on the structure where the KSI will have 360E clearance. (Locations will vary with different structural configurations.)

(9) Attach the mast to the structure and ensure the KSI and mast are securely mounted.

b. U-bolt/Square-bolt attachment:

(1) Remove the KSI and mounting plate from the transit case, and inspect the KSI for any damage that would prevent installation or operation.

(2) Inspect strobe assembly of the KSI for cracks.

(3) Inspect connector for dirt, and bent or damaged pins.

(4) Replace and report damaged equipment, as required.

(5) If the mast is not attached to the KSI, apply two (2) large strips of pile fastener tape to the bottom of the KSI (ensuring the center bolt is not obstructed), and two (2) large strips of hook fastener tape to

the top of the mast (ensuring the mounting hole is not obstructed).

NOTE

For the following step, make sure the KSI and the mast assembly are lined up as described before placing them together, as the fastener tape will make it difficult to separate the units to realign them.

(6) After matching the center bolt with the mounting hole, making sure the four (4) rubber latches on the mast are in line with the four (4) latching brackets on the KSI, place the KSI securely on the mast.

(7) Pull each rubber latch up and over its latching bracket.

(8) Using the square-bolt or U-bolt of the assembly, attach the KSI/mast to a stable area on the structure where the KSI will have 360E clearance. (Locations will vary with different structural configurations.)

(9) Ensure that the KSI and mast are securely mounted.

2.3.2.19.3 Control Unit (CU).

a. Remove the CU from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and fastener tape to the bottom of the CU, if needed. (Refer to paragraph 2.3.1.1 for fastener application.)

e. The control unit can be mounted to various places inside the structure; apply fastener tape to the selected site.

f. Mount the CU to the selected site, and ensure it is firmly seated.

2.3.2.19.4 Power Controller.

a. Remove the Power Controller from the transit case and inspect for damage.

b. Inspect connector for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Apply primer and two (2) strips of fastener tape to the bottom of the Power Controller, if needed. (Refer to paragraph 2.3.1.1 for fastener tape application.)

f. The power controller can be attached to various places; apply primer and fastener tape to the selected site.

g. Mount the Power Controller to the selected site, and ensure it is firmly seated.

Note
Battery must be recharged every 48 hours

2.3.2.19.5 System Cable.

NOTE

Route the cables and connect them to the individual units. Secure the cables safely out of the way using fastener tape tie-wraps at intervals.

Letter/number designators are shown in parenthesis. For example: (P3) or (J1). The designators have been added to clarify connector identifications. Each system cable segment is labeled with its unique designator.

Cable segments are labeled with "P" (plug) and "J" (jack) designators as shown in the following example: "P1/J2," where P1 indicates that the connector of that cable segment is plug #1, and J2 indicates the routing destination, jack #2, of the equipment/cable to which the cable segment is being routed. The installation instructions of this manual identify the equipment/cable to which each cable segment is to be routed.

a. Remove the system cable from the transit case. Inspect the entire length of the cable, making sure there are no bare wires exposed, and the cable has not been damaged in any way.

b. Inspect connectors for dirt and/or damage.

c. Replace and report damaged equipment, as required.

d. Route segment (P3-green sleeve) to the KSI, and connect (P3) to (J1) of the KSI.

e. Route segment (P4-gray sleeve) to the Detector Array, and connect (P4) to (J1) of the Detector Array.

f. Route segment (P2-red sleeve) to the CU, and connect (P2) to (J1) of the CU.

g. Route segment (P1-violet sleeve) to the Power Controller, and connect (P1) to (J1) of the Power Controller.

h. The segment (P5) will not be connected in this configuration. Ensure the connector cover is secured over the connector, and secure the cable out of the way.

i. Secure all cables out of the way with fastener tape or fastener tape tie-wraps. Keep cables out of roadways and water.

2.4 INITIAL ADJUSTMENTS, BEFORE USE, DAILY CHECKS, AND SELF-TEST REQUIREMENTS.

Before operating MILES 2000 equipment, perform the following:

a. Ensure Preventive Maintenance Checks and Services (PMCS) described in Section II have been

performed. Ensure Detector Array is out of the way prior to performing PMCS.

b. If there is a DIFCUE installed on the vehicle, load the DIFCUE Firing Unit and arm the DIFCUE. (Refer to TD 9-6920-893-10/TM 6920-10/5.)

c. Perform the Functional Checks described in Section V.

2.5 OPERATING PROCEDURES.

WARNING

Verify MGSS (M1A1/M1A2 only) or DIFCUE Firing Unit (if installed) is in the SAFE position before powering up the MILES 2000 system. Serious injury/death could occur.

NOTE

For ITS vehicles requiring segment (P5) of the System Cable being connected, ensure that the Power Controller is fully charged. A Power Controller near discharge will cause either BIT to continuously cycle when the system is powered up, or cause the system to continuously reset. Should this occur, turn the Control Unit (CU) off, start the vehicle and allow the Power Controller to recharge for 15 minutes or replace the Power Controller.

2.5.1 Control Mode On Operating Procedures.

Upon power up, the CU will come up with a vehicle status of "CHEAT KILL," the KSI will flash continuously, and the audio alarm will sound continuously. The Controller can reset the vehicle status by setting the CD/TDTD for "reset," and firing at a detector on the vehicle. The KSI will flash once and stop flashing, and audio alarm will sound with four beeps. The vehicle may be made mission ready in one of two ways: 1) the Controller can set up information for the vehicle on the MARS computer, and upload the information to the CD/TDTD, then upload the vehicle via the optical port on the KSI, and 2) the Controller can set the vehicle status to "Control Mode On," using the CD/TDTD (Controller Gun) and the required information can be set from the CU.

NOTE

Pressing any push buttons other than the following four will shut Control Mode Off: Up Arrow, Down Arrow, CTRL/FCTN (red label), and the Enter (red label) push buttons.

a. Turn the Control Unit (CU) on. MILES 2000 equipment should power up and automatically run BIT. Upon completion, the vehicle audio alarm will sound and the CU will indicate whether BIT passed or failed.

NOTE

"Switch Test" will be displayed on the CU during BIT. Verify push buttons are working correctly.

b. After the power on BIT completes, the system will be in a "killed" state and will display "CHEAT KILL POWER SOURCE TAMPER" for approximately 7 seconds. The KSI will be flashing continuously.

Using the CD/TDTD, reset the system.

c. Set the CD/TDTD to Clear Events and place the CD/TDTD into the Kill Status Indicator (KSI) Optical Port and pull the trigger.

d. Press the EVENTS push button on the CU to verify that it has been cleared.

e. Time Synch the system again using a CD/TDTD. Aim at any detector and pull the trigger. KSI will flash twice.

NOTE

Use a CD/TDTD that has been Time Synched by another CD/TDTD. This ensures that all the exercise units and CD/TDTDs have the same date and time.

f. Change the vehicle status to "Control Mode On" by setting the CD/TDTD accordingly. Aim at a detector and pull the trigger.

g. The KSI will flash once, the vehicle audio alarm will sound once, and the CU will display with:

CONTROL MODE ON
(LIMIT 5 MINUTES)

h. With a vehicle status of "Control Mode On," perform the following actions:

(1) Press the BIT/CTRL/FCTN push button on the CU.

(2) The CU will display the main menu:

HOST PLATFORM
VEHICLE SIMULATED

(3) Move the cursor to "HOST PLATFORM" and press ENTER. The CU will display a list of vehicles.

(4) Move the cursor to "ITS" and press ENTER. The CU will return to the previous screen.

(5) Move the cursor to the "VEHICLE SIMULATED" and press ENTER.

(6) The CU will display:

DEFAULT VEHICLES
CUSTOM VEHICLES

NOTE

If using MARS to setup system information on the vehicle, use CUSTOM VEHICLE setting.

(7) Move the cursor to "DEFAULT VEHICLE" and press ENTER. The CU will display a list of vehicles.

(8) Move the cursor to your vehicle selection (Table 2-3) and press ENTER. The CU will display the

"THRESHOLD SCREEN."

NOTE

Should the vehicle be assessed a Cheat Kill, after a Mobility Kill, due to crew movement, turret movement, engine vibration, etc., ask the Controller to increase the vehicle's threshold level.

(9) The CU will display a default threshold for the type of vehicle selected (Table 2-3). Press ENTER.

(10) This will return you to the main menu.

(11) Press the WEAPON SELECT push button on the CU. The CU will display "CONTROL MODE OFF," the KSI will flash once, and the audio alarm will sound once.

2.5.2 Console Display at Night or Limited Visibility.

a. Press either of the Arrow push buttons on the CU. This will light the display for three (3) seconds.

b. Make your selection. Once a push button is pressed, the display will stay lighted for 7.5 seconds, (or 7.5 seconds after the last push button has been pressed.)

c. After the last push button is pressed, and 7.5 seconds has elapsed, the display will return to the default screen. The display will then stay lighted for another three (3) seconds.

d. When BIT is run (from the power-on (battery replacement) or initiated by the user), the display will stay lit during BIT.

Table 2-3. ITS Vehicles.

Vehicle Type	ITS Light, Medium or Heavy	Threshold Default	DIFCUE Present (X)
M9 ACE	Medium	75	
M60A1 AVLB	Heavy	75	
M977 HEMTT	Light	200	
D7G Dozer	Light	200	
FLU 419 SEE	Light	200	
M88A1 Recovery Vehicle	Heavy	75	
M728 CEV	Heavy	75	
MW24C Case	Light	200	
M1009 CUCV 3/4 Ton	Light	200	
Generators	Light	200	
M109A6 Howitzer 155 mm	Medium	150	X
LMTV Truck, Cargo 2 ½ Ton series	Light	200	
M939A1/A2 series - Truck, Cargo 5 Ton series	Light	200	
HMMWV	HMMWV	200	
HMMWV (Armor)	Medium	150	
M978 Fuel Truch	Light	200	
BRDM II	Medium	150	
M992 Ammo Carrier	Medium	150	
M1974	Light	200	

SECTION IV. OPERATION UNDER UNUSUAL CONDITIONS

2.6 ASSEMBLY AND PREPARATION FOR USE UNDER UNUSUAL CONDITIONS.

2.6.1 Unusual Environment/Weather. MILES 2000 equipment is ruggedized to withstand extreme changes in temperature, terrain, and environment. Therefore, assembly and preparation in unusual environment/weather should only require the caution necessary to ensure the safety of the operators and other participants.

2. 6.2 Fording and Swimming. MILES 2000 equipment is waterproof and ruggedized. Therefore, equipment transport which requires fording and/or swimming should only require caution necessary to safeguard operators and participants, and to maintain control and accountability of the equipment.

2.6.3 Emergency Procedures. MILES 2000 equipment requires no additional procedures for emergency situations, as the equipment has been developed to be used for training simulations encompassing a great variety of conditions and levels of threat.

SECTION V. FUNCTIONAL CHECKS

2.7 FUNCTIONAL TEST PROCEDURES.

The functional check for MILES 2000 equipment is accomplished by the Built-In-Test (BIT) performed by the Control Unit (CU). It will run the BIT, and the CU display screen will stay lighted during the test. Once the test has been run, the CU will display the results on the screen. Table 3-1 in Chapter 3, Section I, Troubleshooting, contains the list of possible error messages the CU may display with MILES 2000 equipment.

2.7.1 Built-In-Test (BIT). To run the vehicle system BIT, perform the steps in Table 2-4.

Table 2-4. Built-In-Test (BIT).

ACTION	INDICATION
Turn Control Unit (CU) ON.	Control unit display should light and stay lighted throughout the test. MILES 2000 equipment should power up. Audio alarm will beep once then indicates BIT pass or failure. The KSI will flash continuously. Control unit will automatically begin the BIT.
"SWITCH TEST" will be displayed on the CU.	User may now test push buttons on CU to ensure the push buttons are working properly.
Press the "WEAPON SELECT" push button on the CU.	The display should read "WEAPON SELECT."
Press the "AMMO SELECT" push button.	The display should read "AMMO SELECT."
Continue to do the switch test until you are satisfied that the push buttons are working properly.	The display should match the label of the push button being pressed. Arrow push buttons should read "UP" or "DOWN."
To continue the BIT, simply stop pressing push buttons.	The unit will automatically continue the BIT without further command.
Read results of BIT.	The display will indicate the following: "CHEAT KILL POWER SOURCE TAMPER."

Table 2-4. Built-In-Test (BIT) - Continued.

ACTION	INDICATION
Reset vehicle with the CD/TDTD.	The display will indicate one of the following: **BIT PASSED** - Indicates an operational system then **READY** - The equipment has passed the BIT and the mission may be continued or **BIT FAIL** (with error message)- All or part of the equipment has failed the BIT, or the equipment is not present, or is not properly connected. Refer to Chapter 3, Section 1, Table 3-1 for further action. **KILLED** - The equipment has suffered a Catastrophic Kill. Contact the Controller.

Intentionally left blank.